

STREAM CROSSING

CODE 578

OPERATION AND MAINTENANCE PLAN



The life of this installation can be assured and usually increased by developing and carrying out a good operation and maintenance program. Operation and Maintenance (O & M) is necessary for all conservation practices and is required for all practices installed with NRCS assistance. The land user is responsible for proper O & M throughout the life of the practice and as may be required by Federal, State, or local laws or regulations. The stream crossing is designed and installed to facilitate animal movement in and around streams for the purposes of providing or improving access to forage, water, working/handling facilities, and/or shelter; improving grazing efficiency and distribution; and/or protecting ecologically sensitive, erosive, and/or potentially erosive sites.

Operation is defined as operating the practice in compliance with all laws, regulations, ordinances, and easements and in a manner that is beneficial to the environment and will permit the practice to serve its intended purpose. Maintenance includes working to prevent deterioration of the practice, repairing damage, or replacing components that may fail.

Necessary operation and maintenance items for this practice include:

- **Inspect the crossing regularly, especially after heavy rains. Stream crossings will need periodic maintenance throughout the lifespan. Damaged areas will be filled, compacted, and re-graded immediately. Remove debris or blockages. Repair and/or restore flow capacity as needed.**
- **Maintain the crossing surface in good condition, which includes periodic grading and the addition of stone or other surface material when necessary. Prevent surface ponding by localized grading or addition of stone to remove depressions. Fill low areas in travel treads and re-grade, as needed, to maintain road cross-section. Road base rock may be required to stabilize the foundation.**
- **The top surface of the stone may be eroded away during flooding. This stone must be replaced to ensure a safe and stable travel surface for the livestock.**
- **Maintain all concrete work, rock riprap, grouted rock, flagstone, or precast stone. Replace to original grades with similar materials as necessary.**
- **Culvert-type crossings impose a restriction to stream flow, and can receive excessive damage from floods, requiring regular maintenance to preserve their integrity. Risk can be minimized by crowning the backfill over culvert pipes above bank elevation, leaving a low space on one or both abutments to serve as an emergency spillway**

during out-of-bank flow. Check the wearing surface for ruts, replacing the displaced fill with gravel. Check for erosion of earth fill slopes, upstream and downstream, especially if the crossing has been over topped. Riprap stone can be added to help hold the fill slopes, and may be grouted with high slump concrete to anchor the armor. Check for abnormal settlement around pipes, water passing outside of the culverts can erode fill material. Replace missing fill with large stone prior to replacing the wearing surface. Remove debris blocking pipe inlets and check for scour at the pipe outlets in the channel. Fill eroded channel bottom with riprap stone.

- The fencing component should be checked after every high flow event as well as on a regular basis. Any fencing that has been damaged due to high flow should be repaired immediately. Care should have been taken during installation to minimize the damage caused to the corridor fencing (parallel to the stream) by the cross-fencing (perpendicular to the stream). Replace or repair any fencing as necessary during the lifespan of the practice.
- If the crossing is also used as a watering location, the landowner should check the site during periods of low flow to ensure livestock have an adequate source of water.
- Maintain road ditch and drainage facility capacities. Maintain vegetated areas in adequate cover. Re-seed and mow as needed.
- Immediately repair any vandalism, vehicular, or livestock damage to earth fills, side slopes, spillways, outlets, or other appurtenances.
- If flooding has caused excessive damage to the crossing, contact your local Natural Resources Conservation Service (NRCS) or Soil and Water Conservation District (SWCD) office for assistance.

Other:

Tract/Field No.:			
Landowner/Operator Name:		Review Date:	
Prepared By:		Date:	